French professional football: how much different?

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Chapter 18:

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France, in common with other leading European football nations, was affected by two significant economic shocks in the 1990s. One is the globalisation of the labour market for football players which occurred after the Bosman case in 1995; the other is a substantial change in the format and financial endowment of the UEFA club competitions, accelerated by the failed attempt by Media-Partners in 1999 to create a European Super-League. How has French professional football adjusted to this double shock since 2000? Did French football adjust better or worse than the other major European leagues to the changing financial realities of professional football at the highest level?

Many French sports analysts are inclined to cite the French *Ligue 1* (*FL1*) as the best managed football league in Europe. It is suggested that the French exception copes better than others with football's financial pressures. This exception has been praised as a virtuous example for other European major football leagues such as the English Premier League (*EPL*), Italian *Lega Calcio* (I*LC*), Spanish *Liga de Futbol* (S*LF*) and German *Bundesliga* (G*BL*). Some French official reports had gone as far as to recommend making a rule out of this exception by extending it to all leagues under UEFA's jurisdiction (Collin, 2004; Denis, 2003). Another report more modestly questions the pre-conditions for French football clubs to become both more competitive on the pitch, and economically sound (Besson, 2008). The claimed advantages of the French model may have been influential in informing the thinking underlying the UEFA financial fair play rules

The French model, however, is not universally admired throughout Europe, especially in the countries with the most powerful football leagues. There are at least three criticisms. First, it is argued that relatively weak sporting performance at the European level is the price paid for sound financial management. An extreme variant of this argument, often voiced abroad, is that the French football authorities focus on sound finance to the detriment of sporting performance. Second, smaller deficits and debts may be more an index of the French clubs'

lack of competitiveness than an example of exemplary management. Third, in some countries (for example, the UK, Ireland, and the Czech Republic), the French football league and economy are considered to be too heavily regulated, to the detriment of both competitiveness and the level of sporting performance.

Rather than dismiss out-of-hand such views as belonging to the realm of caricature, this chapter considers whether they contain any grain of truth, and searches for a balanced response. Section 1 begins with an assessment of French football sporting and financial performance. Section 2 examines the inputs mobilised for attaining such performance, in order to evaluate in Section 3 the efficiency of professional football clubs in France. Against the background of a typically optimistic financial self-assessment on the part of French football clubs, Section 4 examines the sources and structure of professional football finance, as well as the role of the league's auditing body. Section 5 presents a more personal analysis, stressing the football clubs' soft budget constraint and a vicious circle between the increasing commercial value of TV broadcasting rights, and skyrocketing club payrolls. Section 6 concludes by drawing some brief conclusions about the future of French professional football.

1. A trade-off between financial and sporting performance?

Sporting outcomes contrast sharply with financial achievements in French football: in a nutshell, the level of sporting achievement is lower in *FL1* than in the other major European football leagues, while financial performance is better on average. A convenient yardstick for evaluating sporting performance is available in the form of achievement records in European and international football. A more subjective assessment can be made by evaluating the sporting quality of domestic games supplied by *Ligue 1*.

The performance of French clubs in UEFA club competition is not impressive. From the inception of the restructured Champions League in 1995-96 (formerly the European Cup) until 2011-12, the share of French clubs in the total number of match wins is 1.5%, compared to 12.4% for German clubs, 16.1% for Italian clubs, 19.0% for English clubs, and 19.0% for Spanish clubs. At the time of writing in 2013, no French club had won a UEFA competition since Paris St Germain won the Cup Winners' Cup in 1996. Between 2000 and 2012 French clubs reached the quarter-finals of UEFA competitions on 13 occasions, as against 24 for I*LC* clubs, 25 for G*BL* clubs, 41 for *EPL* clubs, and 47 for S*LF* clubs (Table 1). In UEFA rankings based on club performance, France's ranking dropped from 4th to 5th in 2009 (below Spain, Italy, England and Germany), and to 6th in 2012 (having been overtaken by Portugal). In 2012

the highest-ranked French club was Olympique Lyonnais in 10th place. Olympique de Marseille were the 2nd highest ranked, in 15th place, followed by Girondins de Bordeaux in 34th place, Paris Saint Germain in 48th place, and Lille OSC in 59th place

Insert Table 1 about here

Turning to the French national team, which is not under the professional league's (LFP: *Ligue de Football Professionnel*) supervision, but instead accountable to the French Football Federation (FFF: *Fédération Française de Football*), performance peaked in 1998 with victory in the FIFA World Cup. At that stage France rose to 2nd place in the FIFA world rankings, behind Brazil. Since then, the French national team was eliminated twice at the round robin (group) stage of the 2002 and 2010 World Cup final tournaments. France reached the 2006 World Cup final, but was defeated by Italy. Subsequently there has been a pronounced downward trend in the national team's performance. In July 2012 France was ranked 14th in the FIFA world rankings, lagging behind countries such as Croatia, Greece and Russia. As regards the French national team's participation in UEFA's European Championships, the peak was a win in 2000, when the team appears to have benefited from the springboard effect of its 1998 World Cup triumph. Subsequently France reached the European Championships quarter-finals in 2004 and 2012, but failed to make any impact in this competition in 2008.

Perhaps one of the most favourable aspects of *FL1* relates to the level of competitive balance. At first glance this sounds paradoxical, since Olympique de Marseille won the championship four times in succession between 1989 and 1992, and Olympique Lyonnais on seven times in succession from 2002 to 2008. However, the number of different clubs that achieved top five placings in FL1 between 1994 and 2012 was 17. This compares favourably with 13 clubs in I*LF* and 14 in *EPL*, and is matched by 17 in both G*BL* and S*LC*, suggesting that competition is no less balanced in top-flight French football than in the other major European football leagues. Considering the most widely used measure of competitive balance over one season, the Noll-Scully index, which refers to the observed win percentage distribution relative to the distribution that would be expected theoretically if all teams were perfectly balanced, *FL1* was the most balanced European major league over the period 1996 to 2012 on average (Table 2A), and was the most balanced in each of the four years from 2005 to 2008, when Olympique Lyonnais dominated the championship. Between 2009 and 2012 competitive balance deteriorated slightly in comparison with the previous decade, in line with an overall trend across all of the major European leagues, with the exception of I*LC*.

Insert Table 2 about here

With regard to long-term competitive balance – measured by the Spearman rank correlation between one year's final ranking and the previous year's ranking in the championship – *FL1* performs even better. FL1 was the most balanced league in seven years out of sixteen between 1997 and 2012. Remarkably, the rank correlation for the 1999-2000 and 2000-01 seasons was zero, suggesting that the rankings for the former season have no predictive content for the latter (Table 2B). According to the standard theory of team sports leagues, *FL1* offers the most balanced competition among the major European football leagues, with the lowest rank correlation on average. However, this conclusion is somewhat paradoxical for the French league[1] because, if competitive balance were attractive to spectators, *FL1* should have attracted more fans into the stadiums than any of the other major European leagues.

Insert Figure 1 about here

Figure 1, however, shows the opposite. Even though the average number of spectators attracted into *FL1* stadiums increased from below 15,000 in 1995 to over 20,000 in 2010, *FL1* still lags behind the rest with an average 20,089 attendance per game in 2009-10. The corresponding 2010 figure for G*BL* was 42,500, *EPL* 34,151, I*LF* 28,286 and S*LC* 24,957. It appears that a high level of competitive balance is insufficient to guarantee a high quality sporting spectacle, contrary to the presumed association between competitive balance [2] and spectator interest. Furthermore, average ticket prices were lower in *FL1* – €19 in 2009 – than in *EPL* (€49), I*LF* (€39), G*BL* (€ 28) and S*LC* (€ 21). One explanation, which has been cited increasingly in the empirical literature, is that football fans attend games in the hope of seeing their favourite team win, rather than in the hope of witnessing a closely balanced contest (Buraimo and Simmons, 2008). In France, it has been suggested that football fandom is only loosely linked to regular stadium attendance.

As suggested above, the presumed advantages of a high level of competitive balance in domestic competition are not reflected in performance or achievement in European or international competition. In general clubs from countries with the least balanced domestic competition, or with the most heavily concentrated distribution of revenue (especially TV revenue), exhibit the best Champions League performances and UEFA rankings (Andreff and Bourg, 2006). Sloane (2006, page 214) confirmed that: "the more successful clubs in small countries may need to be 'too strong' for domestic competitions to have any hope of being successful in European wide competitions". In respect of FL1, "weak" could be substituted

[1] The relationship between high outcome uncertainty and high income seems to work for the German league.

[2] More on empirical limitations of the standard relationship between competitive balance and game attendance in an open team sports league can be found in Andreff (2009 & 2012).

for "small" in this quotation. If high performance in European competition requires a sufficiently unbalanced domestic league, one derives the proposition that *FL1* has been too balanced in the past, in particular until 2008. To some extent, this reasoning may explain the French football paradox.

A reasonable assumption is that the attractiveness of any football game depends on goal scoring. The latter is a rather neglected factor in the academic literature, but it was recently examined for the major European football leagues in 2003-2007 (Andreff and Raballand, 2011). French teams scored on average 2.22 goals per game. The corresponding figures were 2.82 for G*BL*, 2.59 for I*LC*, 2.57 for S*FL* and 2.56 for *EPL*. A regression of a competitive balance measure on various goal scoring measures showed that the former is significantly associated with goals scored and conceded, and the numbers of 0-0 draws and 1-0 wins. League dummies showed that for a G*BL* or I*LC* team to reach the same ranking, it must score significantly more goals than a *FL1* team; the difference between *EPL* and *FL* was not significant. Regressing average game attendance on goal scoring reveals that the average number of goals scored has a positive impact on attendance, while the percentage of 0-0 draws has a strong negative effect.

The importance of goal scoring in attracting spectators is confirmed (Table 3) by regressions of average fan attendance per game in the five European major leagues on the average number of scored goals per game, using data from 1997 to 2010. The relevant coefficient is positive and significant at the 0.01 level. After introducing country dummies, however, the association between these two variables vanishes, while the dummies become significant at the 0.01 level. This suggests that association between fan attendance and goals scored is country-specific, and therefore captured by the dummies. This explanation seems relevant for France, where the patterns of football fandom are rather specific, and probably linked to the demographics of relatively small urban areas (see below).

Insert Table 3 about here

Overall, an excessively balanced domestic competition, together with weak European performances achieved by domestic clubs, and too few goals scored, are factors that may be relevant in explaining the relatively low levels of spectator interest in *FL1*.

A final sporting outcome, sometimes overlooked, refers to the popularity of football not only as a spectator sport, but also as a participation sport. The impact of the professional sport and national team performance on participation has not been studied widely in the sports economics literature, an exception being Dawson and Downward (2011). There is a paucity of comparable data, but the evidence presented by FIFA's Big Count for 2000 and 2006 (Table

4) suggests that Italian and Spanish football may have benefited from the strong performance of I*LC* and S*LF* clubs in UEFA competition, and of the national squads in international competition, since these two countries record the fastest increase in the percentage of football players in their populations. In the case of England, the positive impact of *EPL* clubs' performance in the Champions League may have been offset by the moderate performance of the national team. The increase in the percentage of registered football players in France is probably due more to the achievements of the national squad, rather than the European performance of *FL1* clubs. The same applies to Germany, although there is little evidence of any benefit from the national team's success. An alternative hypothesis is that there is no significant relationship between top-level football performance and participation. Beyond the number of FIFA-registered players, the proportion of non-registered football players may vary widely across the five countries. The data do not allow us to test these conjectures.

Insert Table 4 about here

With regard to *financial results FL1* has experienced a rapid increase in turnover, from €607 million in 2000 to €1,072 million in 2010, a 77% increase over ten years. Even after such growth, *FL1* remains the smallest in economic terms among the five major European leagues: *EPL* turnover is more than twice as large, *BL* and *LF* about 40% larger, and *LC* 20% larger. French clubs are still economically small compared to clubs in other major football leagues. Only two of them regularly appear in the list of the top twenty European clubs in terms of revenues estimated by Deloitte every year: Olympique de Marseille (Marseille: 852,396 inhabitants) and Olympique Lyonnais (Lyon: 472,331 inhabitants). The turnover of several leading clubs, such as Real Madrid, Manchester United, FC Barcelona and Chelsea, is between two and three times as large. Paris Saint Germain has not appeared in the list so far, despite there being 10.4 million Paris inhabitants. One economic weakness of French clubs is a small market size translating into lower stadium and TV revenues. Paris, along with London, is one of only two European urban areas with more than 8 million inhabitants. Among the 44 European urban areas with more than 1 million inhabitants, only three others are located in France (Lyon, Marseille, and Lille). Bourg and Gouguet (2010) refer to a "French territorial exception", and there are 36,000 different administrative municipalities within the country. The local fan base is often geared towards very small geographical locations. In this context it is difficult for clubs to attract a large fan base in cities that are mostly relatively small. In many cases attendance is further constrained by stadium capacity.

Insert Table 5 about here

LFP assesses itself as the best managed European league, but *FL1* has exhibited an overall pre-tax deficit every year since 2000, except for four years (Table 5). Although the magnitude of *FL1* deficits is small compared to I*FL* and S*LC*, the record is not exemplary. League debt has grown from €427 million in 2000 to €690 million in 2008; since then it has remained steady at approximately €600 million (Table 6). With a €610 million debt in 2010, *FL1* was less indebted than Chelsea alone (€638 million) and much less than the whole of the *EPL* (€2,178 million). For *FL1* the greatest concern is the debt structure: payment arrears (on transfer fees, tax and social contributions) representing between 85% (in 2000) and 91% (2008) of overall debt. This figure was 90% in 2009, 85% in 2010 and 87% in 2011. *Ligue 2* (second division) financial data are a lesser cause for concern in this respect. Payment arrears, however, are not indices of good management practices (Andreff, 2007a).

Insert Table 6 about here

Let us now turn to the input side of the French football league and clubs.

2. Accounting for stadiums, wage inflation, player transfers and training.

In French *Ligue 1* and *Ligue 2* most clubs are "professional sporting limited companies" (SASP: *société anonyme sportive professionnelle)*. There are three exceptions: Auxerre and Bastia are limited companies with a sporting purpose (SAOS: *société anonyme à objet sportif*), and Ajaccio is a personal sporting limited liability company. These three clubs can neither pay dividends, nor remunerate their managers. Legislation establishing SASP status was passed by the French Parliament in 1999, in order to phase out these limitations (Drut, 2011). In France, few professional football clubs own their own stadium. Auxerre and Ajaccio are exceptions.[3] Most stadia are rented for around 30 days per year, and cannot be used for a commercial purpose alien to football.

French football *stadiums* are small in comparison to other European major leagues. In 2008, the average capacity in *FL1* was 28,673 seats. The corresponding figures were 45,390 in G*BL*, 43,000 in I*LC*, 38,900 in S*LF* and 38,876 in *EPL*. No new football stadium has been built since 1998, though four were being constructed (Bordeaux, Lille, Lyon, and Nice) at the time of writing in 2012, and five others were undergoing modernisation and refurbishment (Lens, Marseille, Saint-Etienne, Toulouse, and Paris/Parc des Princes) with a view to hosting the 2016 European Championships in France. €150 million was allocated to this task, within the

[3] Lens benefits from a very long-term letting lease, while Lyon is in the process of becoming the owner of its future newly-built arena (OL land).

framework of France's economic recovery programme (€36 billion) launched in 2009 in the wake of the global financial crisis. A frequent argument is that stadium capacity hinders the growth of *FL1* income (Bolotny and Debreyer, 2011). This contention cannot be pushed too far, however, since average capacity utilization of *FL1* stadiums is 76%. This figure is similar to the SLF utilization of 74%, but far below the corresponding figures for the *EPL* (95%) and G*BL* (83%). Italian *Calcio*, in crisis since 2002, has only a 45% utilization rate. Bolotny and Debreyer suggest that in newly-built and modernised stadiums, the focus should be on providing a larger number of VIP and business seats at higher ticket prices, with more catering facilities (alcohol vendors are prohibited from operating in sport stadiums and arenas by the Evin law). Are these strategies likely to succeed? The first depends on the existence of a large potential constituency of French football fans among white-collar workers, the rich and the gentry, which remains to be demonstrated. The second implies that, as in American baseball arenas, spectators are there to crunch popcorn, swallow hamburgers, drink beer and only incidentally watch a game. Better French culinary habits suggest this model might not transfer easily, however.

Insert Table 7 about here

The largest share of football clubs' costs is devoted to paying players' *salaries* and associated social contributions, in France as in other European countries. The *FL1* payroll increased from €324 million in 2000 to €777 million in 2011; it has more than doubled within twelve years (+140% increase). Wage inflation is greater than the increase in league turnover. With more than two-thirds of revenues geared towards payroll payments, *FL1*, along with I*LC* and S*LF*, is seriously troubled by wage inflation (Table 7). In 2010 the ratio of payroll costs to total revenues was 73%, and in 2011 this ratio increased to 75%.

In the sports economics literature on football, a significant correlation has been found between English clubs' payroll costs and their standing in the championship (Szymanski and Smith, 1997; Szymanski and Kuypers, 1999; Hall, Szymanski and Zimbalist, 2002). Moreover, using Granger causality tests, wages are a significant determinant of a club's standing, in line with the theory of efficiency wages. In the same vein, Dobson and Goddard (1998) tested causality from lagged gate receipts to current club's performance. In the case of *FL1* and *Ligue 2*, Llorca and Teste (2012) find reverse Granger causality from sporting performance to payroll costs and gate receipts. They conclude that the model of efficiency wage is not relevant to the specific conditions of French football. Their interpretation is that after a period of success a French football club generates increased revenues, which are immediately used to inflate the payroll in order to retain good players and attract new talent.

FL1 is typically a net exporter of footballing talent: the sales of highly-talented players educated and trained by French clubs are larger in monetary value than expenditure on foreign players imported into the league (Table 5). French clubs transfer abroad players valued more highly than those they buy from abroad; in other words, *FL1* trades its better players for less talented players. To some extent, *FL1* plays the role of a nursery league for new talent. However, from 2001 to 2003, described as "years of folly" (Bolotny, 2006), there was a loss of control over the *balance of transfers*. The league's auditing body – DNCG (*Direction Nationale de Contrôle de Gestion*) – was unable to prevent what has been described as a financially reckless recruitment policy conducted by some *FL1* clubs. In 2010, a similar occurrence increased by €91.7 million the league's deficit, which would have been only €22 million otherwise. The deficit was due to 40 players transferred from abroad at a cost of €136.3 million, while 24 players were transferred to foreign leagues generating €60.4 million in revenue: an overall deficit of €76.1 million.[4] 2010 was usual in the sense that *FL1* ran a net deficit in transfer spending, in contrast to all previous years since 2004. The remaining transfer balance deficit (€15.6 million) was due to trade between *FL1* and *Ligue 2*, since the second division acts as a nursery for top league clubs.

The pattern of transfer flows and their orientation is explained partially by the French *system of educating and training* young football players wishing to become professional, which dates back to 1972. Since 1990, a regulation compels all professional football clubs to develop a vocational educating and training centre for players between the ages of 15 and 19. The player is signed on an apprentice, candidate or trainee contract. The compulsory element is a cause for dissatisfaction among some clubs. Transactions involving players below the age of 18 are not allowed, in line with FIFA rules. Each young player commits himself to remain in education until the end of secondary school, and to sign his first five-year contract with his nursery club. However, following the Bosman judgement, this rule has often been circumvented, and the outflow of French young players to other major European football leagues continues. For instance, in 2007 the average budget of the clubs' vocational training centres was €3.5 million per year. The corresponding figures were €3 million for *EPL* clubs, €2.8 million for I*LC*, and €2.4 million for G*BL* and S*LF*. Free mobility of players in a global labour market since the Bosman case has created a disincentive for rich clubs to invest in educating and training their own young players, because they can find players of the same or

[4] Of course transfers of teenage players, below the age of 18, are not encompassed in these official data since such transfers are forbidden by the 2001 FIFA rules. There is insufficient space to address the infamous issue of a global black market for young players in this chapter. Those interested readers are referred to Andreff (2010) where a so-called "Coubertobin tax" is suggested to resolve or at least alleviate the issue.

higher quality at lower cost in minor nursery leagues, or among clubs specialised in "producing" good players (Ericson, 2000). The experience of 2010 shows that even a league with a solid vocational training system, such as *FL1,* can be affected by this trend from time to time.

The effect of the Bosman case on the transfer market for French players is exacerbated by the present state of the *players' agent* profession. In France, this profession is governed by a code, which forbids agent remuneration higher than 10% of the transaction and prohibits members of certain professions, such as sports club manager, from becoming agents. However, a number of non-registered agents circumvent these rules, and operate in a rigged market where bungs and embezzlements are common practice according to various official reports.[5] Conflicts of interest among agents, club managers and players fuel such malpractice (Brocard, 2010). As a result a study was launched in France in 2005 on reform of the player's agent profession. A new set of regulations came into force in 2008, opening up the profession to foreign agents and attempting to improve the transparency of transactions. A *numerus clausus*, or entry barrier into the profession, was introduced. A player could allow the club to remunerate his agent, instead of the agent being paid by the player himself, legalising the former common practice, but also creating the potential for conflicts of interest. The position of agents was somewhat strengthened by the 2008 changes. However, in 2010, the French Parliament prohibited the remuneration of agents by sports clubs, with a view to reducing conflicts of interest, and made the sanctions heavier for breaching the rules (up to two years in prison and a €30,000 fine). It is too early to assess the efficiency of this new legislation, which is difficult to enforce in a still non-transparent business.

A non-negligible input to football clubs' activity is provided by managers, trainers and coaches. In European football in particular, when a club's sporting performance is disappointing to the fans, the manager or coach is often sacked before the end of season, either to create a psychological shock for the team or change the playing tactics, or in the hope of hiring a higher-quality replacement. It has been demonstrated that firing the coach before the end of season is counter-productive using English (Dobson and Goddard, 2001) and Belgian data (De Dios and Forrest, 2007). Similar results have been reported for French football (Llorca and Teste, 2010). On average, sporting outcomes improve after a change of coach, but econometric testing does not clearly confirm that the improvement can be attributed to the new coach. French clubs that fired their coaches during the course of the

[5] Such as the Stevens report in England in 2006.

football season obtained poorer results on average than similar (poorly ranked, in bad shape) clubs that retained their coaches.

3. Are French professional football clubs efficient?

The contrast between the outcomes of French professional football and the resources it mobilises immediately raises questions about the efficiency of French football clubs. Two papers tackle the issues of technical efficiency and scale efficiency in French football clubs, using Data Envelopment Analysis (DEA). This methodology does not require any assumptions as regards the objective function of the club's manager or owner, and measures efficiency using a framework that takes into account both sporting and financial inputs and outputs. Jardin (2009) finds that, contrary to other estimations for foreign leagues, the strongest *FL1* teams and the most profitable clubs are not the most efficient units in his sample (14 clubs over three seasons, 2004-2007). Club inputs are: total payroll, as a proxy for the team's stock of talent; and the home city population, as a proxy for market size and potential municipal subsidies that can be captured. Club outputs are: the number of points at the end of season, as a measure of sporting achievement; and club turnover, as a measure of financial performance.

Regarding the results, pure technical efficiency scores provide information about high/low managerial efficiency, while scale efficiency scores show whether the club size is optimal or not.

A high average score implies that *FL1* is efficient: more than one-third of clubs are on the best practice frontier with an average score of 0.85 (the maximum is 1) for pure technical and scale efficiency. Scale inefficiency is the main source of inefficiency in *FL1*. On average the clubs' performance is stable over time, but some decline in efficiency is observed, primarily due to the deterioration of the environment that the author interprets as the effect of wage inflation in *FL1*; the latter has exceeded growth in turnover, as noted above. In most cases, French clubs are oversized in terms of inputs, since they overinvest in player talents at the start of each football season. Therefore, the efficiency of club management may be questioned, and lax management seems to reflect weak club governance.

A more recent paper addresses issues of technical and scale efficiency, again using the DEA methodology, for 49 clubs in *Ligue 1* and *Ligue 2* from 2003 to 2008 (Miningou and Vierstraete, 2012). Club inputs are first payrolls, and second all other club expenditures (transportation costs, commodity purchases, and so on). Two other inputs are included to control for the quality of the club's environment: a divisional dummy (*Ligue 1* or *Ligue 2*) and

a dummy for participation in UEFA competitions. Outputs are the number of points at the end of season and game attendance.

The average efficiency score is only 0.625, suggesting that French clubs could have obtained the same output level with 37.5% less input. Among the least efficient, Paris Saint Germain could have saved 80% of its inputs and achieved a similar outcome by operating at maximum efficiency. Average efficiency is higher in *Ligue 2* (0.849) and among those clubs that did not participate in UEFA competitions. However, in both leagues, average efficiency decreases over time, due to player salary inflation. Finally, sporting performance (the club's ranking) and efficiency are not correlated; neither are game attendance and efficiency. The authors again raise the issue of lax management.

4. The sources of French football finance: from TV-dependence to sugar daddies

Three pillars are alleged to be specific to French professional football: its aforementioned system of player vocational training, a strong ethos of solidarity within the league, and its financial control and auditing (Gouguet and Primault, 2006). Another pillar is common to all European football: a financial model that is increasingly reliant on TV revenue.

Solidarity is no longer based on sharing gate receipts between the hosts and visiting clubs, which was phased out in the early 1980s. Since then a *revenue redistribution* scheme relies on the collective sale of TV broadcasting rights by the league, which collects the TV revenues through contracts signed with the TV companies at four-year intervals. Originally, the redistribution scheme was egalitarian, with equal shares of TV revenues being allocated to each *FL1* club. Since 2000, the criteria for revenue distribution have become increasingly complex and non-egalitarian. One portion is fixed and equal for all clubs. A second portion depends upon the clubs' rankings at the end of each season. A third portion is indexed to the club's performance over the past five seasons. A final portion is calculated according to the club's attractiveness, measured by its TV audience - this criterion was introduced in response to pressure from the clubs with the most TV exposure. Table 8 shows that the league champions in 2010 received three times more TV revenue than one of the lowest-ranked non-relegated clubs (Sochaux) and roughly four times more than the three relegated clubs. *Ligue 2* clubs also receive a (small) share of the TV revenue windfall, although their games were not broadcast at all until recently. Legislation passed in 2000 requires the redistribution of a 5% tax on professional football TV revenues to non-professional sports, through the National Council for Sport Development (*CNDS*: *Conseil National de Développement du Sport*).

Insert Table 8 about here

The main debate surrounding the distribution of TV revenues is no longer the question of league competitive balance. The distribution depends on pressure and the relative bargaining power of a small number of rich clubs that are the subject of most of the TV coverage, and the majority of smaller clubs. For the formula for the distribution of the TV revenue reflects a minimal commitment to the principle of solidarity between all professional football clubs on the one hand and, on the other hand, is enforced by law to maintain solidarity between professional football and other less endowed sports that do not benefit from similar TV exposure. Since 2000, however, the solidarity principle has been counteracted by the TV windfall obtained from the UEFA Champions League, which is concentrated on the few clubs qualified to enter this competition. However, this driver towards increasing revenue inequality across the clubs is milder in *FL1* than in other major European leagues, because of the French clubs' relatively poor performance in the Champions League.

As early as 1974 the supervision of professional football clubs' management has been entrusted to a body which became the DNCG in 1990. Since then, DNCG acted as a real *auditing* body, capable of implementing disciplinary sanctions against poorly managed clubs. Every season, the DNCG inspects the financial accounts of all clubs, and since 2002 some of the data have been published, even though initially some clubs in debt attempted to circumvent the requirement to publish their financial data (Andreff, 2007b). The DNCG's main official tasks are to audit clubs' financial accounts, supervise their bookkeeping, detect instances of misreporting, and assess the clubs' financial situation.

When a club is continually in the red, the DNCG can use carrot-and-stick tactics to encourage changes of management practice, so that the club's accounts return to the black. The process begins with warnings, advice and recommendations with regard to urgent policy measures to be taken by the clubs' management. If the financial deficit does not disappear, sanctions can be applied: the DNCG is allowed to audit the payroll in detail, to prohibit the recruitment of new players for a certain period, to impose fines and, as a last resort, to relegate the club to a lower division. Several clubs have been relegated since 1990 under this provision, namely Angoulême, Bordeaux, Brest, Grenoble, Marseille, Nice and Toulouse. The objective is to ensure the financial viability of the French championship in the sense that any club which starts the competition must be able to complete its fixture list over the entire season. In other words, the DNCG guarantees that each club will have sufficient financial resources throughout the season. The auditing body has prevented French clubs from sinking as deeply

into indebtedness as some big Italian and Spanish clubs, or top English clubs such as Chelsea, Manchester United and Arsenal.

To a foreign observer, it may seem strange that on the one hand French football has a strong auditing body, while on the other hand *FL1* repeatedly reports financial deficits. This paradox can be explained by a soft budget constraint (**5** *infra*) linked to weak club governance. Questions have also been raised as to whether DNCG is an *independent* auditor. All of its members are appointed from football backgrounds such as FFF, LFP and players', coaches' and managers' trade unions. A useful reform would be the appointment of at least 50% of the experts who sit on the DNCG from non-football backgrounds.

The model of French *professional football finance* has much in common with other major European leagues. Since the mid-1990s the bigger clubs have largely abandoned their former financial structure, primarily based on Spectators (gate receipts), Sponsors and Subsidies from Local sources – the SSSL model as described in Andreff and Staudohar (2000) – and switched to a MCMMG model of finance based on new Global sources of revenue, such as Media (TV revenue), Corporations, Merchandising and Markets. *FL1* is so typical of MCMMG (Table 9) that its financial structure has been described as TV-dependent or even "TV-addicted". The share of TV revenue in total revenue reached 58% in 2011 and 2012, almost as high as in Italian *Calcio* (over 60% since 2006).

Insert Table 9 about here

With regard to *merchandising* and stadium naming rights, French clubs derive a smaller share of their revenue from these sources than some European clubs, such as Manchester United (merchandising) or Arsenal (naming rights). Le Mans signed a naming rights contract with an insurance company some years ago, but it was later relegated to the second division.

The *markets* that are used for club financing are the labour market for talents by football nursery clubs (**2** *supra*), and capital markets in the form of initial public offerings (IPOs) prior to stock market floatation. In 2012 Malcolm Glazer sold 10% of Manchester United stocks on the New York Stock Exchange, raising $233 million. In some sense, he is swimming against the tide, since the number of listed European football clubs which had reached 44 in the early 2000s, was down to 21 in 2012. The stock market valuation of many listed clubs had fallen, for several reasons: illiquidity of the DJ StoXX Football market, share price volatility, the impact of (poor) sporting performance on a club's stock price, uncertainty attached to the fundamental value of football clubs heavily dependent on intangible assets (the non-amortised value of players' contracts), and finally the low profitability of such investments (Aglietta *et al.*, 2008). French legislation passed in October 2006, allowing sport club shares to be

publicly offered and floated, has linked IPOs to the acquisition of tangible assets likely to reinforce the club's stability and durability. Olympique Lyonnais backed its IPO in 2007 with a project of OL land – a sporting and commercial centre including a 60,000 seat stadium – while FC Istres (2nd division) linked an IPO to the construction of a hotel and a re-education centre for high level sportsmen and women. Since flotation Olympique Lyonnais shares have lost more than 80% of the IPO value, and FC Istres shares have lost more than 60%. Overall, French football's experience of using stock market flotation to raise capital has not been encouraging.

French clubs whose ownership is in the hands of a corporation or a wealthy individual are fewer in number than in *EPL* and I*LC*, but have included RC Paris (Matra), RC Strasbourg (McCormack's IMG) and more recently Rennes (François Pinault), Grenoble (Index Corporation, Japan) and Nantes (Waldemar Kita). Until recently, no French club had attracted big foreign "sugar daddy" investment, as is common in *EPL*[6]. However, there have been signs of an emerging trend. In June 2011, Qatar Sports Investment purchased 70% of Paris Saint Germain stock and spent €85 million on the *mercato* for acquiring star players. The club finished second in the 2011-12 championship. Further recruitment of star players (Zlatan Ibrahimovic and Thiago Silva) has taken place subsequently. In December 2011, Dmitri Rybolovlev, a Russian oligarch (owner of the potash company Uralkali) bought the newly relegated AS Monaco, and provided investment aimed at securing swift promotion. Unlike EPL, at the time of writing French football had not attracted any large-scale American investment.

Sugar daddies sometimes bail out a club in the red, which otherwise should have entered administration (in *EPL*) or been relegated because of a financial deficit (LFP). Paris Saint Germain was a case in point, with a poor financial position and rather weak sporting performance. The new UEFA Financial Fair Play regulation limits losses to €45 million over three years, with external investment permitted to cover current deficits in 2013-14 and 2014-15, with the allowance reducing to €30 million by 2017-18. These regulations will impose restrictions on the extent of possible bail-outs, but will still permit a club to be subsidised by a sugar daddy in a limited way. No doubt, some French clubs may continue to seek foreign investment. However, repeated, even limited, deficits, debts and bail-outs mean that French (and European) football clubs operate with a soft budget constraint.

[6] Al-Fayed in Fulham, Abramovich in Chelsea, Glazer in Manchester United, Gaydamak in Portsmouth, Lerner in Aston Villa, Gudmundsson in West Ham, Hicks and Gillett then NESW in Liverpool, Sheikh Mansour in Manchester City, Usmanov in Arsenal, Mittal then Ecclestone in QPR.

5. Soft budget constraint, TV rights revenues and the financial crisis

Since European football is now essentially deregulated, and in general football clubs do not aim for profit-maximisation, an increasing number of professional clubs run heavy deficits, season after season, and have sunk into deep indebtedness. However, bankruptcy is a rare event, since many clubs have been bailed out, by the banks in Spain (Ascari and Gagnepain, 2006), occasionally by the state (in Italy, the *salve calcio* state plan in 2002, Baroncelli and Lago, 2006), or increasingly by sugar daddy investors. TV companies have regularly helped cover ex post the leagues' deficits by increasing the sums paid for TV rights (Andreff, 2009). In general clubs in the red throughout Europe have not been liquidated, despite heavy arrears on debt repayments, social contributions and tax. Football clubs have spent seemingly without constraint, purchased more inputs than they could afford given their revenues, and have attempted endlessly to recruit expensive superstar players. In this context, economic theory suggests that the firms (clubs) are subject to a soft budget constraint. This situation is typical of a shortage (Kornaï, 1980) or repressed inflation (Benassy, 1982) economy, similar to the former centrally-planned economies, which can also emerge in particular industries in market economies (Kornaï *et al.*, 2003). A case in point is a sports league with clubs that do not maximise profit. Storm and Nielsen (2012) cite evidence supporting the existence of a soft budget constraint in professional football, and stress that European professional football clubs continually operate on the brink of insolvency without going out of business. The survival rate is high,[7] even though the football business perpetually generates losses. Tables 5 and 6 have documented that French football is no exception in this respect. Since the very existence of payment arrears is a well-known index of poor corporate governance, one interpretation of such a situation is in terms of weak club and league governance (Andreff, 2007a, b; Andreff, 2012). It suggests that a disequilibrium model may be more useful in describing an open sports league (Andreff, 2014) than the usual equilibrium model elaborated on by Késenne (2007).

In respect of *FL1*, like most European football leagues, there is a close association between the rise in TV revenue and payroll inflation. An optimistic interpretation suggests a virtuous circle: TV revenues enable teams to pay high salaries in order to field highly performing squads, whose frequent wins accrue increased TV revenues (Baroncelli and Lago, 2006).

[7] Such a high survival rate is demonstrated in English football by Kuper and Szymanski (2009).

Italian *Calcio*, which is the authors' reference, is in the deepest financial crisis and seems difficult to reconcile with the notion of a virtuous circle. Under a vicious circle interpretation, the league, as a monopoly supplier in its own market, bargains for the highest possible TV rights in order to raise ex post the finance that will cover rampant payroll inflation and the escalating costs of superstar recruitment. If this strategy is successful, it will sustain league finances and to some extent bail out football clubs that are in the red. However, in many football leagues, like *FL1*, the recruitment strategy financed by TV revenue does not translate into sufficient team improvement to produce success in European competition, as required to achieve substantial gains in revenue. With the clubs unable to recoup their recruitment expenditures, the league has to revert to the broadcasters in an effort to negotiate an even higher price for the TV rights, and so on. The direction of causality in the relationship between TV revenues and payroll can be tested, in order to validate the vicious circle assumption. Our test is confined to the two French professional football leagues. The sample encompasses 213 observations from seasons 2002-03 to 2007-08. Under the vicious circle interpretation, TV revenues are the endogenous variable, explained by the following exogenous instrumental variables:

POP 2005, 2005 population of the city where the team is located;

NOT represents the media attractiveness of each team, using its ranking by LFP according to audience performance;

DIST is a proxy for the distance that TV channels have to cover in order to reach the stadium of each team. *DIST* is measured using team transportation costs (available from team budgets), which is a suitable proxy, since it measures the costs incurred for a team to travel to all other stadiums in the league (similar to the costs imposed a TV channel that travels to all stadiums for broadcasting purposes). We test the relationship:

$$TV = k + a.POP2005 + b.DIST + c.NOT + d.LEAGUE + e.Year2 + f.Year3 + g.Year4 + h.Year5 + i.Year\ 6 + zi \quad (1)$$

Equation (1) includes a league dummy variable (*LEAGUE* = 1 if *Ligue* 2 and *LEAGUE* = 0 if *Ligue* 1), and a dummy variable to test whether the relationship is sensitive to the observation year (2003 being the reference year). We then examine the relationship between payroll (salaries and compulsory social contributions) and the endogenous regressor *TV*. Staiger and Stock (1997) have demonstrated that, when instrumental variables are weak, conventional asymptotic results do not hold with large samples. If the F-statistic is smaller than 10 with a

single endogenous regressor, there is a potential issue of a weak instrumental variable. To be relevant, our test must exhibit F > 10, which is the case.

Insert Tables 10 and 11 about here

The relationship between the *TV* variable and instrumental variables is significant in all four specifications of model (1). Playing in a higher division is also significant. The observation year is not significant, except in 2007 and 2008 when tough bargaining on the part of the TV companies resulted in an agreement, reached in February 2008, in which the value of the TV rights was almost unchanged. The relationship between payroll and TV revenues is significant in all specifications, and the hypothesis of a vicious circle in which TV revenues determine salaries is supported. Even though UEFA Financial Fair Play sends a signal in the right direction of hardening the clubs' budget constraints, it might not be sufficiently onerous to dismantle this vicious circle. A hard budget constraint would preclude the clubs from running any deficits, and strict enforcement would be required. The extent to which UEFA Financial Fair Play is enforced remains to be seen.

Since the 2008-09 season *FL1*, in common with most other European football leagues, has been affected by the impact of the global financial and economic crisis: attendance has decreased slightly (Figure 1), and the league's revenues have stagnated (Table 5). This has translated into harsher times, with 20 clubs exhibiting pre-tax deficits in the two divisions in 2011[8]. Six clubs have moved beyond the €5 million UEFA annual deficit allowance, and will have to adjust in 2013. Against this bleak background, the good news is the recently increased attractiveness of French professional football to international media, which has materialised through the creation of BeIn1 and BeIn2 channels by the Qatari company Al-Jazeera. Be-In has invested €150 million for live broadcasts of 8 out of 10 televised games during the week. This cash injection adds to the €420 million spent by Canal+ to broadcast two games each weekend on prime time TV. Renewed competition between two TV channels put an end to four years of slowdown in the growth of football TV revenues, owing to the monopoly position of Canal+ in the market. This represents good news for the future of French football finance.

6. Conclusion: Which future for French professional football?

[8] In million €: Bordeaux (-6.5), Caen (-1.6), Lens (-5.9), Lille (-8.7), Lyon (-35.1), Marseille (-14.7), Monaco (-0.3), Nice (-1.2), Paris Saint Germain (-0.2 after bail out), Valenciennes (-3.7); and in *Ligue* 2 : Ajaccio (-2.6), Angers (-0.7), Châteauroux (-0.2), Evian TG (-0.6), Istres (-0.4), Le Havre (-1.5), Le Mans (-2.9), Metz (-5.5), Sedan (-0.2), Troyes (-1.6).

FL1 is neither much different from other major European football leagues, nor an exception as regards its management and governance. In common with other leagues, a soft budget constraint triggers wage inflation and heavy dependence on TV revenue. No major French club has gone bankrupt, although many have been in the red. This feature, however, is not French-specific but industry-specific, since the picture is similar in other major European football leagues. In some respects French football shows signs of convergence with the latter, especially regarding the opening up of French football to international investors, to a foreign broadcaster, to Russian and Qatari sugar daddies, and to global football on-line betting. Eventually, French football will have to align with the new UEFA Financial Fair Play rules. This will be a step forward, as in many other European countries, on the path to better governance and management. Nevertheless, the imposition of a hard budget constraint of a kind that is characteristic of shareholder-controlled profit-maximising firms in many other sectors, is a distant prospect. The last published 2011 LFP report, following the October 2010 "football States General" triggered by the poor behaviour of the national squad at the 2010 World Cup, calls for governance reform and the creation of a Football High Authority, but does not go as far as recommending the imposition of a hard budget constraint. An urgent priority is the tightening the enforcement of on-line betting regulation, and the supervision of bets by a state regulator (*ARJEL*: *Autorité de Régulation des Jeux en Ligne*). This was introduced in June 2011, to address concerns that sporting integrity may have been undermined by rigged bets staked by international networks into fixed matches.

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Table 1: Performance of European major leagues in UEFA competitions, 2000-2012

Champions League	English EPL	French FL1	German BL	Italian LC	Spanish LF
Number of winners from	2	**0**	1	3	5
Number of 1/4 finalists	30	**7**	11	17	25
Europa League	English EPL	French FL1	German BL	Italian LC	Spanish LF
Number of winners from	1	**0**	0	0	5
Number of 1/4 finalists	11	**6**	14	7	22
Total	English EPL	French FL1	German BL	Italian LC	Spanish LF
Number of winners from	3	**0**	1	3	10
Number of 1/4 finalists	41	**13**	25	24	47

Source: UEFA (2000 is for the 1999-2000 season, and so on).

Table 2: Competitive balance in five European major football leagues (1997-2012)

A/ Noll-Scully index

Season	French L1	English EPL	Italian LC	Spanish LF	German BL
1996/97	1,47	1,23	1,33	1,61	1,43
1997/98	1,31	1,28	1,76	1,39	1,14
1998/99	1,42	1,52	1,35	1,41	1,52
1999/2000	***0,88***	1,69	1,65	1,03	1,43
2000/01	1,15	1,43	1.60	1,29	1,14
2001/02	1,18	1,72	1,71	1,14	1,54
2002/03	1,28	1,62	1,56	1,32	1,23
2003/04	1,46	1,57	1,86	1,28	1,61
2004/05	***1.10***	1,73	1,45	1,51	1.50
2005/06	***1,44***	1,94	1,97	1,49	1,53
2006/07	***1,06***	1,64	1,78	1,39	1.30
2007/08	***1,36***	2,09	1.60	1,46	1,47
Mean 96/08	*1.26*	1.62	1.64	1.36	1.40
2008/09	1.58	1.91	1.59	1.50	1.59
2009/10	1.60	1.87	1.56	1.84	1.53
2010/11	***1.25***	1.33	1.52	1.71	1.38
2011/12	***1.48***	1.78	1.56	1.70	1.60
Mean 08/12	*1,48*	1,72	1,56	1,69	1.53
Mean 96/12	***1.32***	**1.65**	**1.62**	**1.44**	**1.58**

B/ Spearman rank correlation between season t and season t-1 rankings

Season t	French L1	English EPL	Italian LC	Spanish LF	German BL
1996/97	0.50	0,63	n.d.	0,55	***0,34***
1997/98	0,46	0,43	0,65	0,61	***0,39***
1998/99	0,49	0,71	0,53	0,71	***0,37***
1999/2000	***0,24***	0,83	0,81	0,59	0.70
2000/01	**0.00**	0,88	0,85	0,65	0,25
2001/02	***0,08***	0,61	0,75	0,61	0,69
2002/03	***0,28***	0,63	0,62	0,55	0,53
2003/04	0.60	***0,43***	0,81	0,45	0,44
2004/05	0,68	***0,45***	0,64	0,59	0,61
2005/06	0,67	0,66	***0,43***	0,48	0,75
2006/07	***0,48***	0,66	0,52	0,58	0,72
2007/08	***0.20***	0,66	0,65	0,59	0,49
2008/09	***0.23***	0.70	0.80	0.87	0.65
2009/10	0.71	0.75	0.59	0.63	***0.34***
2010/11	0.33	0.87	0.46	0.60	***0.09***
2011/12	0.48	0.86	0.75	0.40	***0.09***

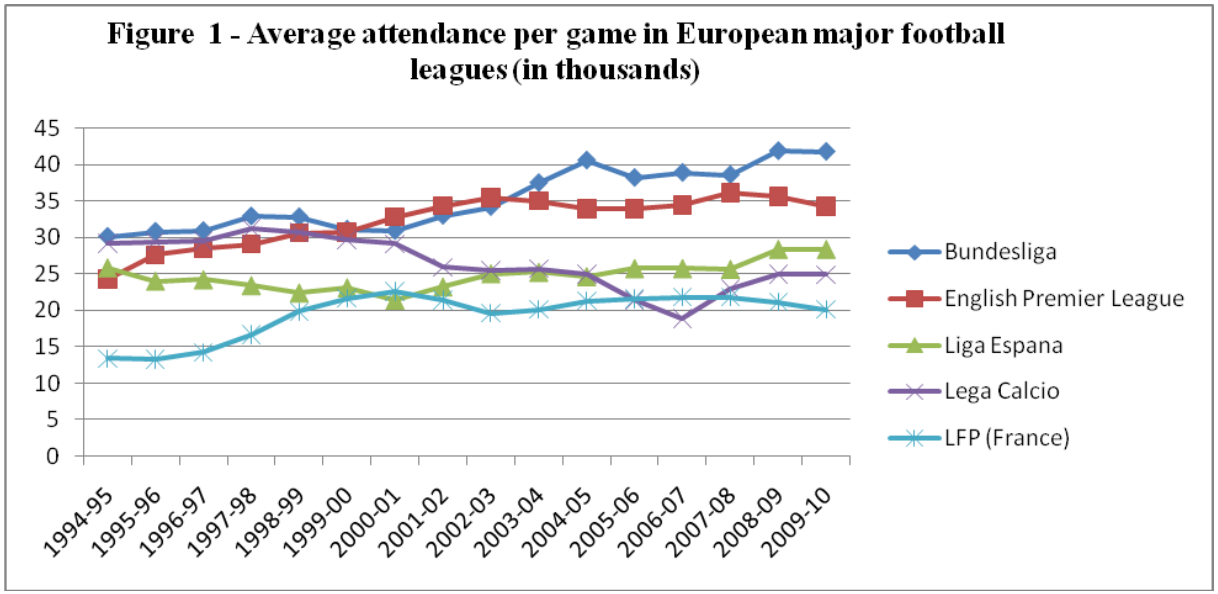

Table 3: Regression of average fan attendance on the average number of goals scored 1997-2010

Independent variables	Coefficient	Model 1 Standard error	P>|t|	Coefficient	Model 2 Standard error	P>|t|
Average number of goals /game	18.918	3.236	0.000***	-1.460	3.260	0.656
GER dummy				16.434	1.998	0.000***
SPA dummy				4.960	1.580	0.003***
ENG dummy				13.343	1.470	0.000***
ITA dummy				6.298	1.509	0.000***
Constant	-21.263	8.457	0.014**	23.640	7.611	0.003***

*** significant at a 1% threshold; ** at a 5% threshold.

Table 4: The percentage of registered* football players in the population

Year	England	France	Germany	Italy	Spain
2000	5.4	4.7	7.6	7.0	6.1
2006	6.9	5.2	7.7	8.6	7.0

* Registered in their national federation.

Source: FIFA Big Count.

Table 5: Turnover, pre-tax cash balance and transfer fee balance in French professional football (million €)

	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11
Turnover												
Ligue 1	607	608	643	689	655	697	910	972	989	1,048	1,072	1,041
Ligue 2	120	124	134	135	137	165	186	206	222	229	200	202
Total	727	732	777	824	792	862	1,096	1,178	1,211	1,277	1,272	1,243
Cash balance												
Ligue 1	2.2	-53.6	-46.3	-151.2	-35.9	-32.5	27.7	42,7	25.0	-14,7	-114,1	-46.1
Ligue 2	1.4	-14.2	-20.2	-15.8	-8.0	5.5	5.0	4,1	1,8	-18,9	-15,9	-18.9
Total	3.6	-67.8	-66.5	-167.0	-43.9	-27.0	32.7	46,8	26,8	-33,6	-130.0	-65.0
Transfer fee balance												
Ligue 1	8.1	-19.3	-68.1	-100.2	17.9	3.0	14.7	31.7	58.8	41.9	-91.7	73.4
Ligue 2	19.5	26.0	21.0	10.3	15.5	12.2	11.8	20.1	21.1	37.3	16.5	18.5
Total	27.6	6.7	-47.1	-89.9	33.4	15.2	26.5	51.8	79.9	79.2	-75.2	91.9

Source:
LFP/DNCG.

Table 6 : Ligue 1 balance sheet (million €)

Ligue 1	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11
Intangible fixed assets*	341.2	434.7	346.5	249.8	167.1	194.3	262.9	266.6	346.1	339.2	356.5	273.8
Other fixed assets	41.6	45.3	60.2	75.2	75.8	90.2	102.4	95.2	116.0	103.7	112.2	114.8
Circulating assets	295.9	332.2	329.0	237.8	265.6	274.3	266.1	339.1	369.4	355.3	348.2	363.0
Liquidities	124.5	117.1	111.5	157.7	92.5	108.9	187.9	191.9	168.2	149.5	112.4	173.5
Total Assets	803.2	929.3	847.2	720.5	601.0	668.7	819.3	892.8	999.7	947.7	929.3	925.1
Own capital	89.3	84.0	142.8	93.2	139.4	111.7	159.6	208.6	213.4	265.6	189.0	183.7
Stockholders accounts	163.5	223.1	141.7	119.9	60.1	53.1	75.2	51.2	61.8	56.6	104.9	100.9
Provisions, risks	123.0	101.0	59.6	49.9	37.3	37.5	52.5	54.0	34.6	32.7	25.4	29.0
Financial debts	64.5	96.3	86.1	112.7	66.1	63.0	70.4	71.3	62.4	60.2	94.2	87.2
Other debts **	362.9	424.9	416.9	344.8	298.1	403.4	461.6	507.7	627.6	532.6	515.7	524.3
Total Liabilities	803.2	929.3	847.2	720.5	601.0	668.7	819.3	892.8	999.7	947.7	929.3	925.1

* Players transfer fees not yet amortised.

** Payment arrears, tax and social contribution arrears.

Source: LFP/DNCG

Table 7: Ratio between gross payroll* and European football clubs total revenues
(in %)

League	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
German BL	56	54	53	50	55	47	51	45	50	51
English EPL	62	60	62	61	61	59	62	63	62	67
Spanish LF	54	73	72	72	64	64	64	62	63	63
Italian LC	62	75	90	76	73	62	58	62	68	73
French FL1	53	64	69	68	69	63	59	64	71	69

* Salaries and associated social contributions.

Source: Deloitte

Table 8: Redistribution of TV rights revenues across Ligue 1 clubs, 2009-2010

(millions euros)

Season rank	Club	Fixed portion	Portion based on season rank	Portion based on past 5 seasons ranks	Portion based on audience/notoriety	Total
1	Marseille	12.4	17.9	3.1	17.4	50.8
2	Lyon	12.4	15.6	3.6	15.0	46.6
3	Auxerre	12.4	13.5	1.6	2.8	30.4
4	Lille	12.4	11.8	2.3	7.6	34.1
5	Montpellier	12.4	10.2	0.2	1.2	24.1
6	Bordeaux	12.4	8.9	2.7	10.2	34.2
7	Lorient	12.4	7.7	0.4	1.0	21.6
8	Monaco	12.4	6.7	1.6	3.7	24.5
9	Rennes	12.4	5.8	2.0	5.7	26.0
10	Valenciennes	12.4	5.1	0.3	1.3	19.2
11	Lens	12.4	4.4	0.8	6.5	24.1
12	Nancy	12.4	3.8	0.5	2.4	19.2
13	Paris St Germain	12.4	3.3	0.9	12.9	29.5
14	Toulouse	12.4	2.9	1.0	3.2	19.6
15	Nice	12.4	2.5	1.0	1.8	17.8
16	Sochaux	12.4	2.2	0.6	2.1	17.3
17	Saint-Etienne	12.4	1.9	1.3	8.8	24.4
18	Le Mans	12.4	0	0.5	1.5	14.4
19	Boulogne	12.4	0	0.2	0.7	13.3
20	Grenoble	12.4	0	0.3	0.9	13.6

Source: LFP.

Table 9: The structure of French Ligue 1 finance, 1996-2012

Season	Gate receipts	Subsidies	Sponsors	TV revenues	Others*	Total
1995-96	24	17	22	31	6	100
1996-97	22	15	26	32	5	100
1997-98	21	12	20	42	5	100
1998-99	22	10	20	42	6	100
1999-00	17	4	16	56	7	100
2000-01	16	4	18	51	11	100
2001-02	15	3	20	52	10	100
2002-03	15	4	20	52	9	100
2003-04	18	4	22	47	9	100
2004-05	19	3	20	49	9	100
2005-06	15	3	18	57	7	100
2006-07	22	2	16	53	7	100
2007-08	14	2	20	56	8	100
2008-09	14	2	18	55	11	100
2009-10	13	2	16	57	12	100
2010-11	13	2	17	58	10	100
2011-12	13	2	18	58	9	100

* Includes Merchandising

Source: DNCG.

Table 10: OLS regression of TV rights revenues on instrumental variables

TV rights revenues	(I)		(II)		(III)		(IV)	
	Coefficient	P > |t|	Coefficient	P > |t|	Coefficient	P > |t|	Coefficient	P > |t|
POP 2005	0.003	0.03**	0.002	0.06*	0.003	0.03**	0.002	0.05**
DIST	9.73	0.00***	7.11	0.00***	9.34	0.00***	6.30	0.00***
NOT	-26.53	0.71	-138.45	0.03**	-73.29	0.31	-217.86	0.00***
LEAGUE			-7137.80	0.00***			-7816.28	0.00***
Year 2003-04					-1067.83	0.44	-703.34	0.54
Year 2004-05					-422.42	0.75	-118.31	0.92
Year 2005-06					2009.61	0.14	2832.70	0.01***
Year 2006-07					2527.31	0.07*	3751.95	0.00***
Year 2007-08					1684.71	0.23	3139.85	0.01***
Constant	-1323.90	0.23	7243.41	0.00***	-1235.42	0.35	7855.52	0.00***
R2	0.76		0.82		0.77		0.84	
F-stat	220.26		236.64		87.41		122.29	

*** Significant at a 1% threshold; ** at a 5% threshold; * at a 10% threshold.

Table 11: OLS regression of payroll on predicted TV rights revenues

Payroll	(I)		(II)		(III)		(IV)	
	Coefficient	P > |t|	Coefficient	P > |t|	Coefficient	P > |t|	Coefficient	P > |t|
Predicted TV	1.047	0.00***	1.101	0.00***	1.086	0.00***	1.175	0.00***
LEAGUE			1419.37	0.22			2415.21	0.04**
Year 2003-04					709.14	0.62	773.27	0.53
Year 2004-05					695.07	0.61	793.43	0.51
Year 2005-06					-1455.02	0.30	-1728.96	0.16
Year 2006-07					-4539.37	0.00***	-4934.97	0.00***
Year 2007-08					-2827.49	0.05**	-3220.82	0.01***
Constant	848.51	0.15	-566.08	0.66	1729.91	0.11	-470.50	0.75
R2	0.77		0.82		0.78		0.83	
F-stat	692.88		484.64		118.90		144.09	

*** Significant at a 1% threshold; ** at a 5% threshold; * at a 10% threshold.